REVISED

R & D CATALOG FORM

DATE
18 November 1965

1. PROJECT TITLE/CODE NAME
Modulated-Light Direct Film Viewer (Overrun/Change in Scope)

2. SHORT PROJECT DESCRIPTION
A direct film viewer utilizing a modulated kinescope illumination system to provide selectively dodged illumination of film transparencies on a (Contd)

3. CONTRACTOR NAME

25X1

4. LOCATION OF CONTRACTOR

5. CLASS OF CONTRACTOR
Manufacturer

6. TYPE OF CONTRACT
CPFF

7. FUNDS
FY 1965 $
FY 1965 $
FY 1966 $

8. REQUISITION NO.

9. BUDGET PROJECT NO.
Old NP-V-15 / New NP-ML-2

10. EFFECTIVE CONTRACT DATE *(Begin - end)*
May 1965 - January 1966

11. SECURITY CLASS.
A.A. - Confidential
T. - Unclassified
W. - Unclassified

12. RESPONSIBLE DIR... ECT OFFICER TELEPHONE EXTENSION
DDI/NPIC/P&DS/

25X1

13. REQUIREMENT/AUTHORITY
This project is required to improve the state-of-the-art in the direct viewing of film transparencies for exploitation purposes. Additional funding is required for an overrun and a change of scope.

14. TYPE OF WORK TO BE DONE
Engineering Development

15. CATEGORIES OF EFFORT

MAJOR CATEGORY	SUB-CATEGORIES
Viewers and Interpretation Equipment	Electronic Interpretation/Analysis

16. END ITEM OR SERVICES FROM THIS CONTRACT/IMPROVEMENT OVER CURRENT SYSTEM, EQUIPMENT, ETC.
This contract is for the development and production of two identical prototype modulated light direct film viewers. The cost of the first unit, which includes development, is [redacted] the cost of the second unit is $[redacted] No viewer having any similiar capability is known to exist.

25X1

17. SUPPORTING OR RELATED CONTRACTS *(Agency & Other)*/COORDINATION
This is a new concept which does not duplicate any other effort within the Intelligence Community.

Declassification Review by NGA/DoD

18. DESCRIPTION OF INTELLIGENCE REQUIREMENT AND DETAILED TECHNICAL DESCRIPTION OF PROJECT *(Continue on additional page if required)*
The viewer is intended to fulfill a requirement for an electronically dodged source of illumination for direct viewing of film transparencies. The device will reduce the physiological strain on the human visual system and will also improve the display of photographic information for more efficient and effective exploitation. The selection of this proposal represents the culmination of two years work on the part of the Plans and Development Staff in conceiving and formulating the objectives of such a viewer and three independent feasibility (Contd)

19. APPROVED BY AND DATE

OFFICE	DEPUTY DIRECTOR	DDCI

2. light table.

18. studies performed by industry under contract to NPIC. The three companies representing industry in this program were EG&G, 25X1 [redacted] All three of these corporations performed creditable investigations in the state-of-the-art of controlled light spot scanning to define the feasibility of this concept.

25X1 The selection of [redacted] for the second phase prototype development was on the basis that they demonstrated more interest in the total program and were obviously the most aggressive in their pursuit. In addition to an excellent investigative phase, they performed considerable work in detailing the general design parameters of an operational prototype and projected the significance of their investigation into the realm of the Rear-Projection Modulated Light Film Viewer. The concept of the Modulated Light Direct Film Viewer they proposed is comprehensive and responsive to our requirements. In spite of the short term of their proposal (four months vice nine months by GAC) the cost of the [redacted] proposal is only two-thirds as great. 25X1

25X1 [redacted] proposed to build two prototype Modulated Light Direct Film Viewers having the following characteristics:

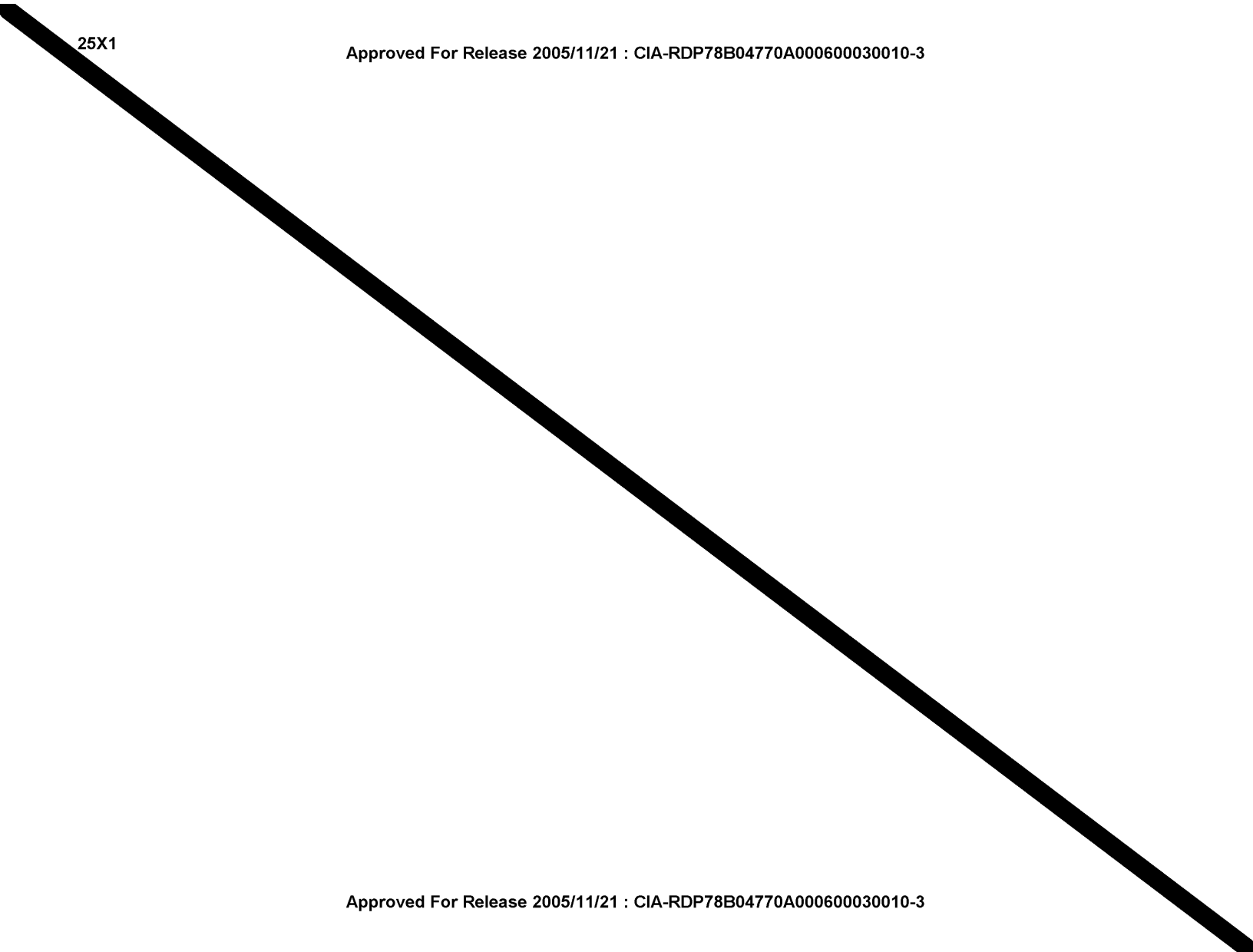
a. Overall dimensions approximately 68" wide X 25 - ½" deep X 40" high (to table top).
b. Modulated-light area size 9" x 12".
c. Kinescope will be a 17" diameter tube with 140" radius-of-curvature faceplate. The tube is not a production item in that a special high-current gun will be employed. Phosphor type is P4.
d. A motorized film transport system will be provided.
25X1 e. A [redacted] 7X to 30X Stereo Zoom microscope in 360° rotatable arm, mounted on a suitable carriage will be furnished.
f. Illuminated area peak brightness will be about 1000 ft-lamberts.
g. Contrast compression will be 30:1.
h. Scan will be box type, i.e. non-unidirectional, and without visible flicker.
i. Operating controls will be located for easy access and will consist of:

Brightness
Contrast compression gain
Height and Width of illuminated area
Position control of illuminated area.

18. j. Complete X-ray protection for the operator will be included in the design.
k. The table top will be tiltable to 45°, and turntable can be rotated 360°.
l. The equipment will be designed and built in accord with good commercial practice and [redacted] Workmanship Standards. 25X1
m. An Operation and Maintenance Manual will be furnished to the customer.
25X1 n. [redacted] personnel will assist in initial installation of equipment and instruction of operating personnel, and repair if required for a period of six months.

On the basis of the feasibility of this concept it was felt that for the nominal additional cost of [redacted] the production of two 25X1
identical prototypes was most prudent. The second prototype may be retained at the contractor's facility for a short period to perform additional investigative work while the first model is under evaluation at NPIC. Later the second model will be made available for operational use. A change in scope of [redacted] is required for console 25X1
packaging; a design which will more nearly conform to the operational requirements at NPIC. Specifically, the height of the illuminated surface was reduced from 40 inches to 33 inches and the electronic cabinets were lowered to 30 inches. The overrun incorporated a counter balanced microscope transport system ([redacted] and the 25X1
fabrication of a flat face kinescope tube -- the light source ([redacted] 25X1
These two items were excluded from the original contract; however, during development it became apparent that the use of these approaches would obviate many extremely difficult mechanical problems. The counter balanced microscope will permit uniform microscope translation regardless of the degree of tilt of the light table. The flat face kinescope tube will allow microscope translation over a flat surface rather than a curved one as would be the case if a standard kinescope were employed. All three of the above items affect both of the tables being fabricated.

Appropriate security channels for this contractor are already established.



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